



Innocent Until Proven Guppy

Guppies in Guam streams may be big trouble.

Over 60 non-native species of fish are living in the streams and freshwater pools of the Pacific islands. One species is known far

and ponds by aquarium owners.

Although seemingly harmless, these fish can pose a serious threat when introduced to sensitive native stream ecosystems which have developed through time without these wee

poeciliids threaten Pacific island streams and ponds?

First of all, guppies have long been known to reproduce quickly. They are prolific breeders capable of producing over 100 fish in a single brood... in as little as five weeks! They are also live bearing fish which can result in a single pregnant female establishing an entire new population. Add these traits together and you can rapidly wind up with a lot of little fish.

Research has shown that these small fish prey heavily on native aquatic insects. It is likely that guppies have contributed to the decline or extinction of three species of native stream-breeding damselfly species

in Hawaii. They can also be carriers of non-native parasites (including nematodes and tapeworms) that could be transferred

to native stream fish.

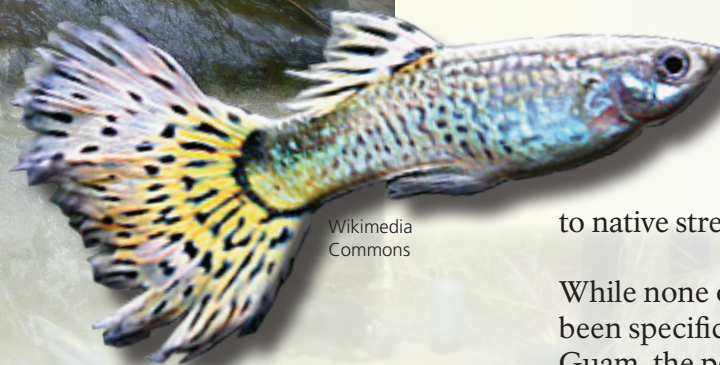
While none of these effects have been specifically documented on Guam, the potential consequences of guppies are enough to raise a red flag for park managers and consider possible interventions.

Early detection of invasive species like guppies is the key to early control. Perhaps we found these guppies in Asan River early enough to minimize the negative impact they might have on the native species and the river itself. Only time and continued stream monitoring will tell.

—Anne Farahi, NPS
Biological Technician



Surveying the stream animals along Asan River in War in the Pacific National Historical Park helps the NPS detect when a new species makes its way into the river.



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and wide... the guppy.

Guppies (*Poecilia reticulata*) are a popular aquarium fish due to the brightly colored tails of the males, as well as their general heartiness and widespread availability at pet shops.

These tiny *poeciliid* fish have been introduced to Pacific streams for a variety of reasons. To be clear, they don't belong there. Originally introduced to freshwater areas in the Pacific as a form of biological control for mosquitoes, it is suspected that they are now most often released into fragile streams

foreign invaders.

Recently, on a monitoring trip to Asan River in War in the Pacific National Historical Park on Guam, the Inventory and Monitoring Program discovered a population of guppies living in one particular segment of the waterway. This discovery prompted scientists and managers to consider the potential impacts of introduced guppies in Guam streams.

So how do guppies and other